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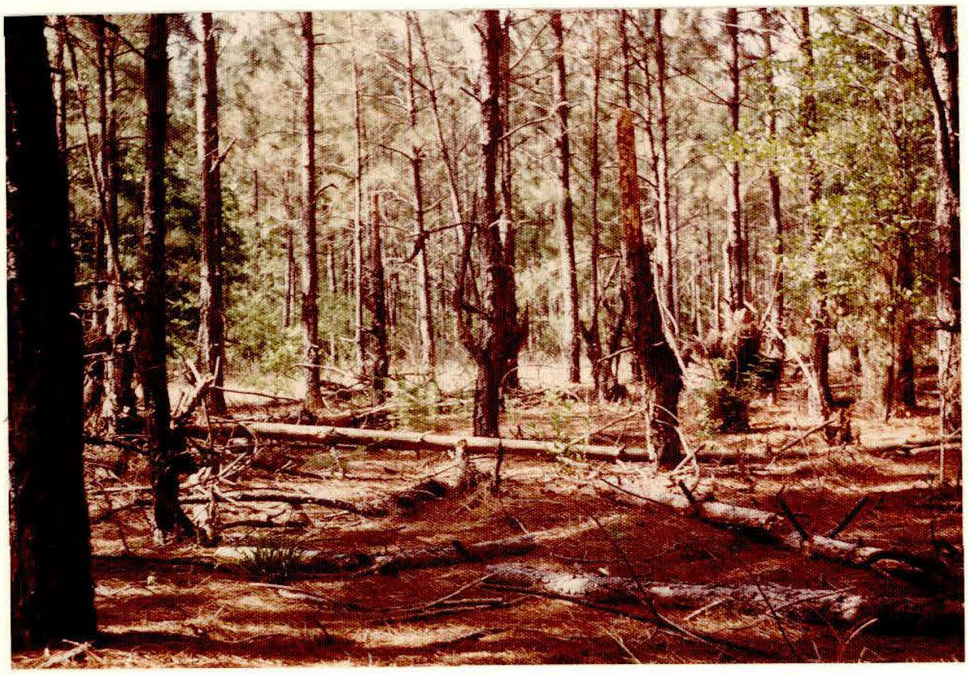

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FUSIFORM RUST: ACRES OF SLASH AND LOBLOLLY PINE WITH AT LEAST 10 PERCENT OF THE TREES WITH FUSIFORM RUST

by

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ABSTRACT

About 13,845,300 acres of slash and loblolly pines in the southern United States have at least 10 percent of the trees with fusiform rust.

Fusiform rust (caused by Cronartium quercuum [Berk.] Miyabe ex Shirai sp. fusiforme) is the most serious disease of slash and loblolly pines in the southern United States. Because of the financial losses caused by this disease, it is imperative that accurate estimates be made of the extent of the damage. To do this, the Washington D. C., Forest Insect and Disease Management Office has established a Forest Insect and Disease Information System (FIDIS). This report presents the level I information for fusiform rust as outlined in FIDIS.

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At least 10 percent of the trees with main stem or potential main stem cankers (gall on the main stem or on branches within 12 inches of the main stem) was selected as the arbitrary level to classify a stand as infected.

All acreage figures have been reviewed by State Forest Insect and Disease personnel.

FOREST INSECT AND DISEASE INFORMATION SYSTEM (FIDIS)

Level I

1. Date - 1979

2. Species - Fusiform rust on slash and loblolly pines

3 and 4. Acres of slash and loblolly pines with at least 10 percent of the trees with fusiform rust by state and ownership.

Table 1.--Acres with at least 10 percent of the trees with fusiform rust.

State	National Forest	Other Federal	State	Private
	Acres with at least 10 percent of slash and loblolly pines with fusiform rust.			
Alabama	61,900	20,100	20,100	1,938,900
Arkansas	6,500	1,200	800	50,400
Florida	47,000	28,400	22,500	1,020,200
Georgia	78,500	71,600	14,800	3,871,700
Louisiana	61,300	15,700	31,400	1,461,700
Mississippi	86,500	6,700	6,800	1,585,200
North Carolina	28,700	9,600	9,700	1,296,300
South Carolina	82,200	32,000	47,900	1,322,000
Texas	36,500	1,300	1,400	461,800
Virginia	-	-	-	6,000
	489,100	186,600	155,400	13,014,200

5. Acres infected - 13,845,300

The following rationale was used:

1. Infected acre equal at least 10 percent of the trees per acre with stem or potential stem cankers.

2. Determine acres of slash and loblolly pine by ownership (Source - Renewable Resources Data).

3. Separate acres in step 2 into high and low hazard fusiform acres (Source - Phelps report).

4. Multiply each acreage figure in step 3 by the average percent of acres with at least 10 percent infection in high and low hazard areas. (Source - Renewable Resources Data in N.C., S.C., Ga., and Fla.).

5. Arkansas was reported well below the low hazard area and therefore multiplied by 3 percent (Source - Phelps survey).

6. Texas was multiplied by 12 percent for loblolly pine and 13 percent for slash pine (Source - Walterscheidt and Van Arsdel's report in PDR).

7. Virginia data were provided by Joel Artman, Virginia Division of Forestry.

8. All data were added to determine acres affected.

Sources Used:

1. Phelps, William R. 1973. Fusiform rust incidence survey 1971-73 USDA, Forest Service, Southeastern Area, State and Private Forestry. 31p + 8 append. (unnumbered publ.).

2. State inventory reports

3. Renewable Resources Inventory Data

4. Walterscheidt, M. J., and E. P. Van Arsdel. 1976. Distribution of fusiform rust on slash and loblolly pines in Texas. Plant Disease Reporter. Vol. 60, No. 8.

* * * IMPORTANT * * *

This report is based on good, solid data for N.C., S.C., Ga. and Fla. The expansion to ownership class and other states contains a lot of assumptions. The data base will be improved considerably when a data sharing system is established between FI&DM, SEFES, and SO. This is expected around October 1980. The estimates will also be improved as each state is resurveyed.